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P a t e n t c l a i m s

1. Method for heating a roller used in the production and/or finishing
of a web of material, particularly a paper web or paperboard web,
10 c h a r a c t e r i z e d in that
the roller (12) is heated from the outside by a heated gas (14).
2. Method according to claim 1,
c h a r a c t e r i z e d in that
15 the fuel gas (14) is generated by means of at least one burner (18,
38) arranged near the roller surface (16).
3. Method according to claim 2,
c h a r a c t e r i z e d in that
20 the fuel gas (14) emerging from the burner (18) acts on the surface
(16) of the rotating roller.
4. Method according to one of the preceding claims,
c h a r a c t e r i z e d in that
25 the roller (12) is heatable on a zone basis viewed in the direction of
the roller axis (X), with the various zones being heatable
independently of each other at least in part.
5. Method according to one of the preceding claims,
30 c h a r a c t e r i z e d in that

several burners (18) distributed over the length of the roller (12) are provided.

6. Method according to one of the preceding claims,
5 characterized in that
the burner used is a catalytic burner (18) by means of which the
heat gas (14) is generated through combustion of a fuel (20) with air
(22) or oxygen.
- 10 7. Method according to one of the preceding claims,
characterized in that
the burner (18) comprises a carrier (24) with catalytic coating.
8. Method according to one of the preceding claims,
15 characterized in that
a fuel gas is used as fuel (20).
9. Method according to one of the preceding claims,
characterized in that
20 the burner (18) is fed with an in particular adjustable fuel gas/air
mixture.
10. Method according to claim 9,
characterized in that
25 the fuel (20) and air (22) are fed to a mixing element (26) installed
upstream from the burner (18).
11. Method according to one of the preceding claims,
characterized in that

the supplied air (22) is distributed by means of an air distributor (28) among several burners (18).

12. Method according to one of the preceding claims,
5 characterized in that
the reaction or roller temperature is adjusted or controlled by means
of the fuel/air mass flow ratio.
13. Method according to one of the preceding claims,
10 characterized in that
the fuel gas mass flow is controlled.
14. Method according to one of the preceding claims,
15 characterized in that
the fuel gas concentration in the air is controlled.
15. Method according to one of the preceding claims,
20 characterized in that
the respective control is performed on a zone basis.
16. Method according to one of the preceding claims,
characterized in that
hydrogen or hydrogen-rich gas (reformat) is used as fuel.
- 25 17. Method according to one of the preceding claims,
characterized in that
natural gas is used as fuel.
18. Method according to one of the preceding claims,
30 characterized in that

a respective burner (18) is arranged in an air-moving chamber (34) and the air flowing over the burner (18) is mixed with the burner waste gas.

- 5 19. Method according to claim 18,
c h a r a c t e r i z e d in that
the air flowing over the burner (18) is mixed with the waste gas from
the burner (18) by means of a mixing element in the region of the
end of the air-moving chamber (34) facing the roller.
- 10 20. Method according to one of the preceding claims,
c h a r a c t e r i z e d in that
hot gas (40) generated by means of a burner (38) is mixed with
supplied cold air (46) in at least one mixing element (44) in order to
15 generate the heat gas (14) for acting on the roller (12).
- 20 21. Method according to claim 20,
c h a r a c t e r i z e d in that
the mass flow of the cold air fed to the mixing element (44) is
adjustable or controllable.
- 25 22. Method according to claim 20 or 21,
c h a r a c t e r i z e d in that
the burner (38) is fed with air (56) and fuel (54), in particular fuel
gas.
- 30 23. Method according to claim 22,
c h a r a c t e r i z e d in that
natural gas is used as fuel gas (54).

24. Method according to one of the claims 20 to 23,
c h a r a c t e r i z e d in that
the hot gas (40) generated by means of the burner (38) is distributed
by means of a gas distributor (42) among several mixing elements
5 (44) that are distributed over the length of the roller (12).
25. Method according to claim 24,
c h a r a c t e r i z e d in that
the mass flows of cold air fed to the various mixing elements (44) are
10 separately adjustable or controllable at least in part.